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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/689,011 | 10/20/2003 | Amber D. Huffman | P16624 | 4106 |

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| EXAMINER | |
|---|---|
| NAMAZI, MEHDI | |
| **ART UNIT** | **PAPER NUMBER** |
| 2189 | |

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/689,011 | HUFFMAN ET AL. | |
| | Examiner | Art Unit | |
| | Mehdi Namazi | 2189 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *20 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26,28,29 and 31-37* is/are rejected.

7)☒ Claim(s) *27 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/27/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. This office action is in response to application filed October 20, 2003.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 26, 28, 29, and 31-37 are rejected under 35 U.S.C. 102(e) as being anticipated by AAPA.

As per claim 26, AAPA teaches receiving at a storage device driver (a software component that permits a computer system to communicate with a device) an asynchronous notification indicating that a current media status associated with a storage device has changed (specification, page 2, lines 2-3, the Compact Disc Drive reads information from a CD that can be inserted into or remove from the drive); determining a current media status in response to the received indication (specification, page 2, lines 5-7); and arranging for the current media status to be provided to an operating system (specification, page 2, line 3-4, the storage device also transmit information to a host system which loaded with operating system).

As per claim 28, AAPA teaches passing an asynchronous indication of the current media status to the operating system (Specification, page 2 paragraph 1, by

inserting or removing a CD from CD drive the storage sends an asynchronous message to host as the result of insertion or removal, the message is asynchronous because the message is sent independent of any timing mechanism).

As per claim 29, AAPA teaches a storage medium having stored thereon instructions that when executed by a machine result in the following (specification page 2, paragraph 1, the instruction already loaded into the CD drive wherein by inserting or removing a CD from the drive, it sends a message to host):

Receiving at a storage device driver (a software component that permits a computer system to communicate with a device) an asynchronous notification indicating that a current media status associated with a storage device has changed (Specification, page 2 paragraph 1, by inserting or removing a CD from CD drive sends an asynchronous message to host as the result of insertion or removal, it is asynchronous because the message is sent independent of any timing mechanism), determining a current media status in response to the received indication (specification, page 2, lines 5-6, the host may need to determine whether or not the removable media is currently inserted into a CD drive), and arranging for the current media status to be provided to an operating system (specification, page 2, lines 3-4, the storage device also transmit information to a host system).

As per claim 31, AAPA teaches passing an asynchronous indication of the current media status to the operating system (specification, page 2, lines 10-110).

As per claim 32, AAPA teaches receiving from a storage device driver (a software component that permits a computer system to communicate with a device) an

asynchronous indication of a current media status associated with a storage device and a removable media (specification, page 2, lines 5-7); and performing an action in response to the asynchronous indication (specification, page 2, lines 3-4).

As per claim 33, AAPA teaches determining whether information stored on the removable media should be provided to a user (specification, page 2, line 11).

As per claim 34, AAPA teaches a storage medium having stored thereon instructions that when executed by a machine result in the following (specification page 2, paragraph 1, the instruction already loaded into the CD drive wherein by inserting or removing a CD from the drive, it sends a message to host):

receiving from a storage device driver (a software component that permits a computer system to communicate with a device) an asynchronous indication of a current media status associated with a storage device and a removable media (specification, page 2, lines 5-7); and performing an action in response to the asynchronous indication (specification, page 2, lines 3-4).

As per claim 35, AAPA teaches determining whether information stored on the removable media should be provided to a user (specification, page 2, line 11).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA), and further in view of Takeuchi et al.(US. Pub. 2005/0080842).

As per claims 1, 10, 12, and 36, AAPA teaches determining at a storage device that a current media status has changed; and transmitting an asynchronous message to a host system as a result of the determination (Specification, page 2 paragraph 1, by inserting or removing a CD from CD drive the storage sends an asynchronous message to host as the result of insertion or removal, the message is asynchronous because the message is sent independent of any timing mechanism).

As per claims 1, 10, and 36, AAPA teaches the claimed invention but fails to teach the asynchronous message can also be transmitted for a reason other than a current media status change.

Takeuchi teaches an interface and packet transfer method wherein the device uses a set device bits packet at the time of termination of data transfer and notifies error information and status information to the host (page 8, paragraph 135).

Therefore, it would have been obvious to person of ordinary skill in the art at the time of the invention was made to incorporate the method of using a set device bits packet as taught by Takeuchi in corresponding to the method of sending asynchronous messages to the host as taught by AAPA in order to accept the next command without cancellation of the currently executed command during data transfer (page 1, paragraph 6).

As per claim 10 Takeuchi teaches a detection unit (paragraph 21), and an interface unit (paragraph 4).

As per claims 2, 11, 18, Takeuchi teaches the asynchronous message is associated with a serial advanced technology attachment interface (page 1, paragraph 4, lines 7-8).

As per claims 3, 19, Takeuchi teaches the asynchronous message is associated with a set device bits packet (page 8, paragraph 135).

As per claim 4, AAPA teaches determining is performed while the storage device is in a lower-power state (specification, page 2, paragraph 1, prior to inserting CD into CD drive the storage device is in a low-power state).

As per claim 5, teaches the reduced power state is a sleep state().

As per claims 6, 17, 25, AAPA teaches receiving from the host system a command to adjust a power state associated with the storage device (specification, page 2, paragraph 1, lines 7-8).

As per claims 7, 13, 16, 22, AAPA teaches receiving from the host system a query for a current media status; and transmitting to the host system an indication of the current media status (specification, page 2, paragraph 1, lines 5-7, the host system may need to determine whether or not the removable media is currently present in the storage device, wherein by inserting a CD into disk drive a message will be send to host).

As per claims 8, 14, 23, AAPA teaches the current media status indicates at least one of : (i) an absence of a removable storage media, and (ii) a presence of a

removable storage media (specification, page 2, lines 2-4, by insert or removing CD from storage device, the storage device transmit information to a host system).

As per claim 9, AAPA teaches the storage device comprises a compact disc drive (specification, page 2, line 2).

As per claim 15, AAPA teaches receiving at a host system an asynchronous message from a storage device as a result of a current media status change (Specification, page 2 paragraph 1, by inserting or removing a CD from CD drive sends an asynchronous message to host as the result of insertion or removal, it is asynchronous because the message is sent independent of any timing mechanism), arranging for a power state associated with the storage device to be adjusted as a result of the asynchronous message (specification, page 2, paragraph 1, lines 7-8).

As per claim 15, AAPA teaches the claimed invention but fails to teach the asynchronous message can also be transmitted for a reason other than a current media status change.

Takeuchi teaches an interface and packet transfer method wherein the device uses a set device bits packet at the time of termination of data transfer and notifies error information and status information to the host (page 8, paragraph 135).

Therefore, it would have been obvious to person of ordinary skill in the art at the time of the invention was made to incorporate the method of using a set device bits packet as taught by Takeuchi in corresponding to the method of sending asynchronous messages to the host as taught by AAPA in order to accept the next command without

cancellation of the currently executed command during data transfer (page 1, paragraph 6).

As per claim 20, Takeuchi teaches generating an interrupt to a storage device deriver in response to the asynchronous message (paragraph 8).

As per claim 21, AAPA teaches a storage media having stored thereon instructions that when executed by a machine result in the following (specification page 2, paragraph 1, the instruction already loaded into the CD drive wherein by inserting or removing a CD from the drive, it sends a message to host):
Receiving at a host system an asynchronous message from a storage device as a result of a current media status change (Specification, page 2 paragraph 1, by inserting or removing a CD from CD drive sends an asynchronous message to host as the result of insertion or removal, it is asynchronous because the message is sent independent of any timing mechanism), arranging for a power state associated with the storage device to be adjusted as a result of the asynchronous message (specification, page 2, paragraph 1, lines 7-8).

As per claim 21, AAPA teaches the claimed invention but fails to teach the asynchronous message can also be transmitted for a reason other than a current media status change.

Takeuchi teaches an interface and packet transfer method wherein the device uses a set device bits packet at the time of termination of data transfer and notifies error information and status information to the host (page 8, paragraph 135).

Therefore, it would have been obvious to person of ordinary skill in the art at the time of the invention was made to incorporate the method of using a set device bits packet as taught by Takeuchi in corresponding to the method of sending asynchronous messages to the host as taught by AAPA in order to accept the next command without cancellation of the currently executed command during data transfer (page 1, paragraph 6).

As per claim 24, AAPA teaches a host processor (specification, page 2, paragraph 1, host is the processor); and a disk drive (specification, page 2, line 2, Compact Disc (CD) drive), wherein the disk drive is to transmit asynchronous message to the host processor indicating that a current disk status has changed (Specification, page 2 paragraph 1, by inserting or removing a CD from CD drive sends an asynchronous message to host as the result of insertion or removal, it is asynchronous because the message is sent independent of any timing mechanism).

As per claim 24, AAPA teaches the claimed invention but fails to teach the asynchronous message can also be transmitted for a reason other than a current media status change.

Takeuchi teaches an interface and packet transfer method wherein the device uses a set device bits packet at the time of termination of data transfer and notifies error information and status information to the host (page 8, paragraph 135).

Therefore, it would have been obvious to person of ordinary skill in the art at the time of the invention was made to incorporate the method of using a set device bits packet as taught by Takeuchi in corresponding to the method of sending asynchronous

messages to the host as taught by AAPA in order to accept the next command without cancellation of the currently executed command during data transfer (page 1, paragraph 6).

As per claim 37, AAPA teaches, the event is associated with activation of a button (specification, page 2, line 2-3, inserting or removing CD from Disc drive is done by pushing a button).

***Allowable Subject Matter***

4. Claims 27, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehdi Namazi whose telephone number is 571-272-4209. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mehdi Namazi
November 27, 2005

11/28/05

MANO PADMANABHAN
SUPERVISORY PATENT EXAMINER